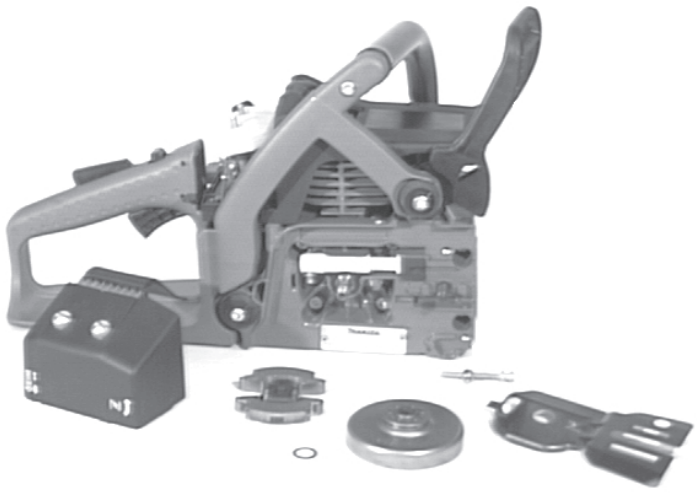
Service Manual

1/94



PS-340, 341
PS-400, 401

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Technical data

Model		PS-340/341	PS-400/401
Displacement	cm³	33	39
Bore	mm	37	40
Stroke	mm	31	31
Rating	kW	1,4	1,7
Idling	rpms	2600	2600
Allowed max engine speed with bar and chain	1/min	11500	12000
Gap Flywheel / Coil	mm	0,2	0,2
High tension wire legth		mm	300
Spark plug NGK		BPMR-6F	BPMR-6F
CHAMPION			RDJ-7Y
Elektrode gap	mm	0,5	0,5
Fuel tank capacity	Ltr.	0,4	0,4
Oil tank capacity	Ltr.	0,25	0,25
Carb. adjustement	L / H	1/1	1/1
Starter rope ø / length		mm	3 / 900
Saw chain Terms / Pitch		092	092
		Low Profil	Low Profil
Cutter type		7	7
		Semi chisel	Semi chisel
Gauge	inch mm	3/8 (9,52)	3/8 (9,52)
Drive Link	inch mm	0.50 (1,3)	0.50 (1,3)
Filing Angle			30°
Sideplate Angle		85°	85°
Cutting Angle		60°	60°
File Guide Angle		90°	90°
Depth Gage Setting	mm	0,65	0,65
File ø	mm	4,0	4,0
Kick back Reduction		Depth Gauge / Bumper Tie Strap	Depth Gauge / Bumper Tie Strap
Cutting length	cm	35/40	35/40
Drive Link	Count	52/56	52/56
Sprocket	No of Teeth	6	6
	type	Rim (fixed)	Rim (fixed)

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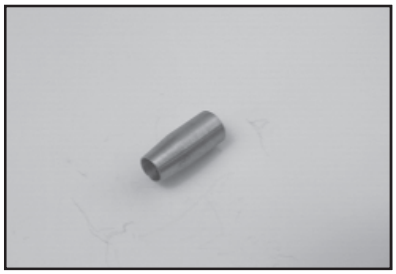
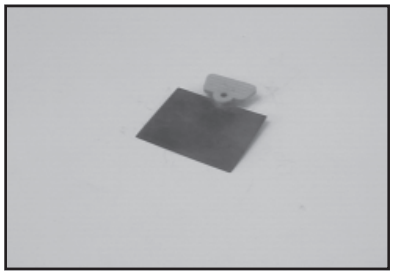
Special tools

Puller for oil seals

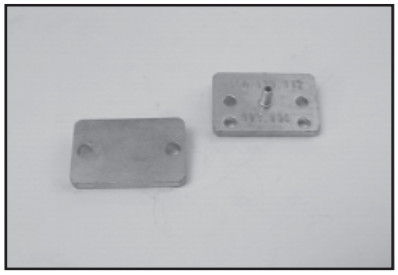
944 500 870



Mounting sleeve
for radial rings
944 500 540



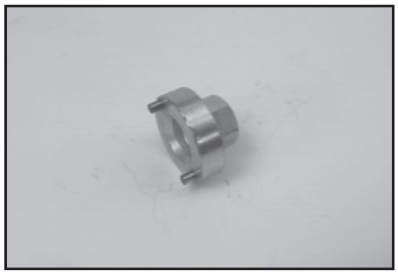
Setting gauge for
ignition armature
944 500 890



Sealing plate for leakage
test of crankcase
944 603 020 / 944 603 030

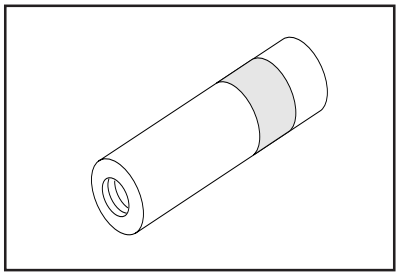
Drift for piston pin

944 603 250



Mounting tools for
clutch hub
944 500 690

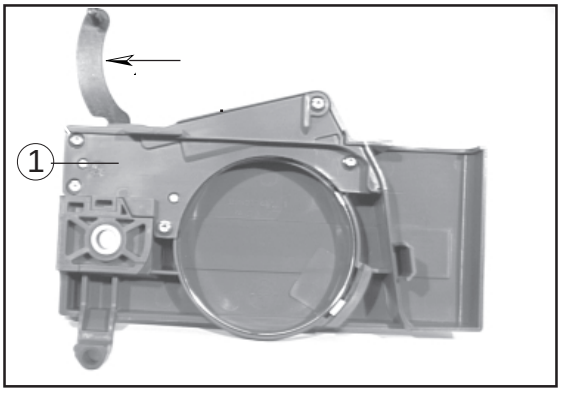
Dis- and mounting tools for
drive worm of oil pump
950 500 020



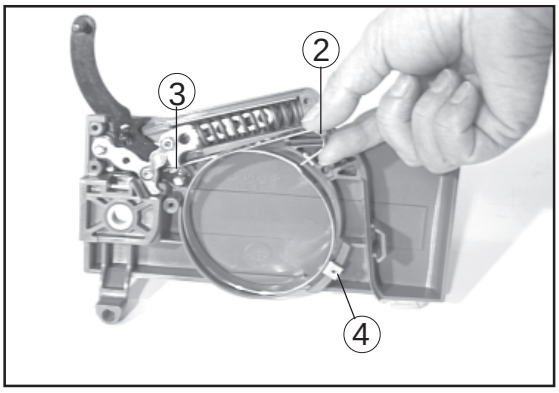
Jarring blow punch

944 500 880

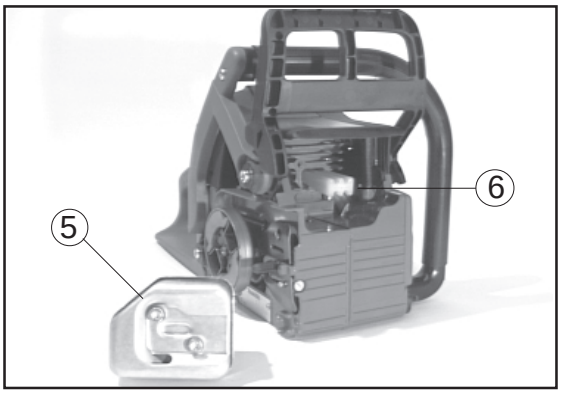
01 Chain brake 02 Clutch, clutch drum



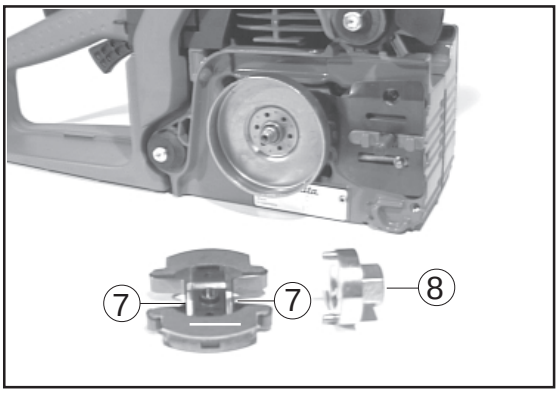
01-02 Replacing the brake band
Remove the sprocket guard from the engine unit. Release the chain brake by pushing the lever in direction of the arrow.
Unsrew the five srews and remove the protection plate (1).



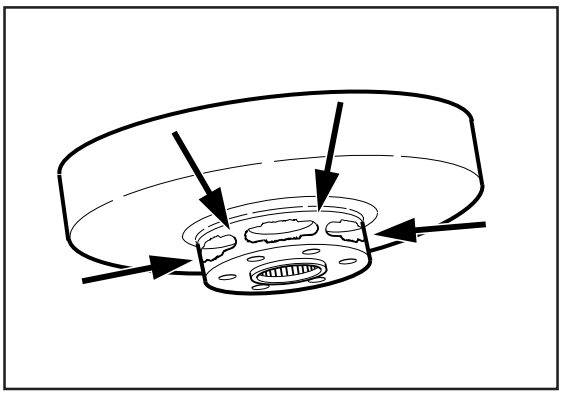
01-02 Replacing the brake band
Lift brake band out of the sprocket guard (2) and of the hook (3). When fitting a brake band ensure that the guide piece (4) is installed correctly in the slot of the sprocket guard.



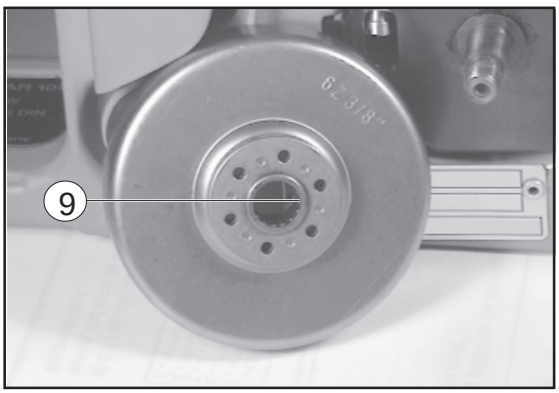
02-01 Removing the clutch and clutch drum
Block the cylinder unit before removing the clutch drum or clutch. For this purpose unscrew the muffler (5) and pass the piston stopp wedge (6) 944 602 001 into the exhaust duct of the cylinder.



02-01 Unscrewing the clutch
To unscrew the clutch use spanner (8) no. 944 500 690.
Caution: **Left-hand thread.**
If required, the clutch springs (7) have to be replaced as a complete set.

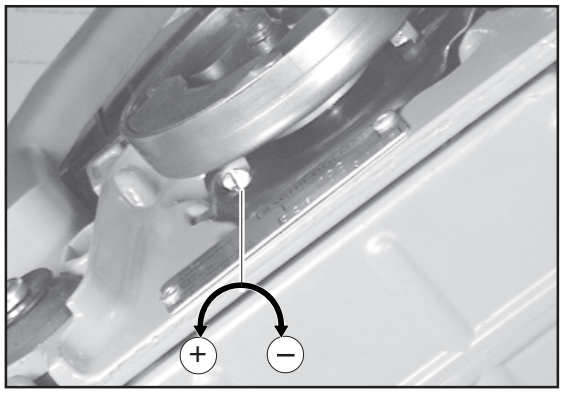


02-03 Checking the clutch drum/sprocket
Clean or renew in the case of contamination or wear.



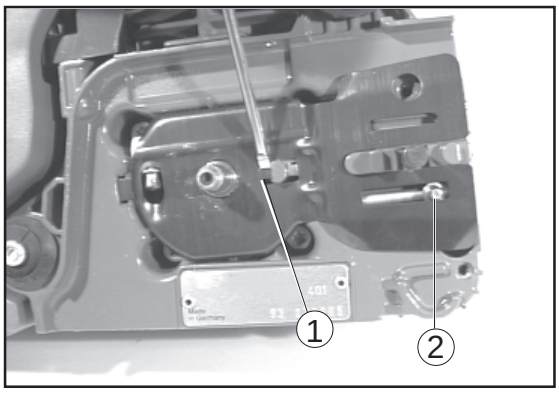
02-04 Mounting the clutch drum
Lightly grease the needle bearing (9) prior to installation.
Tighten the clutch using a torque of **25** Nm.

03 Oil pump

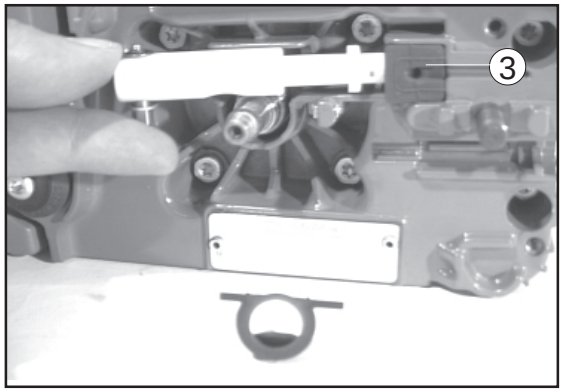


03-01 Adjusting the oil pump delivery
Adjustment is by turning the screw

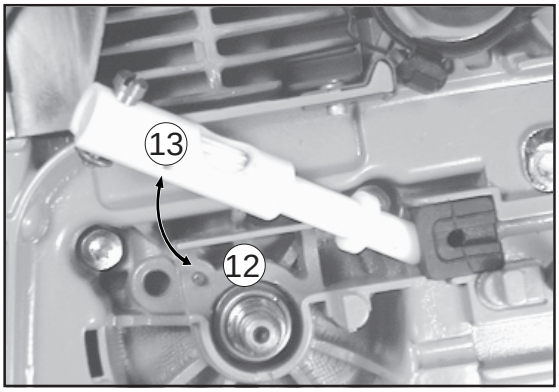
clockwise = less chain oil (–)
anti-clockwise = more chain oil. (+)



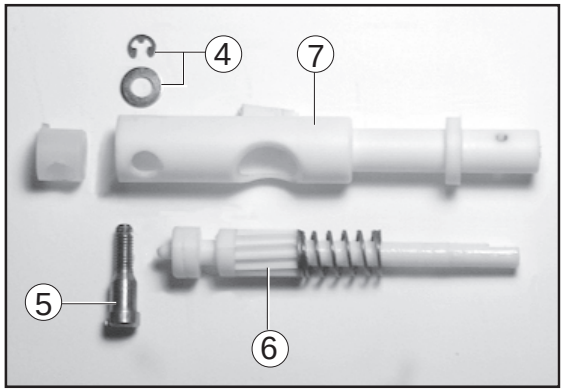
03-02 Dismantling the oil pump
Slightly raise the claws from the chain guide plate (1) and remove the guide plate and the chain tensioner (2).



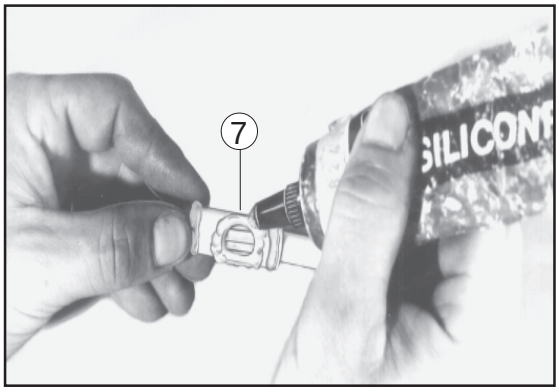
03-02 Removing the oil pump
Pull out the oil pump from the crank case and from the suction line (3).



03-02 Mounting the oil pump
When mounting the oil pump, the pin (12) must be inserted into the hole (13).

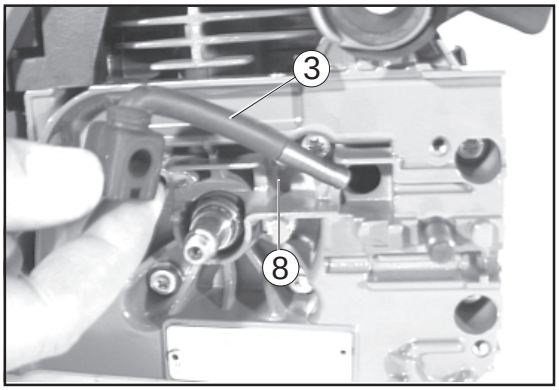


03-03 Inspecting the oil pump
Remove the retaining ring and the washer (4). Remove the set screw (5). Remove the oil pump plunger (6) together with the compression spring from the housing (7).

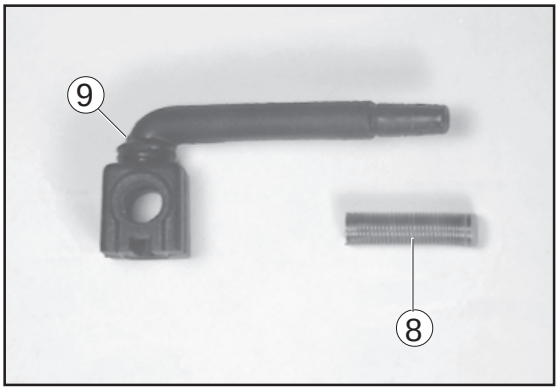


03-03 Assembling the oil pump
Prior to reassembling the oil pump, liberally grease the oil pump plunger (6) and the housing (7) with silicon compound no. 980 007 100.

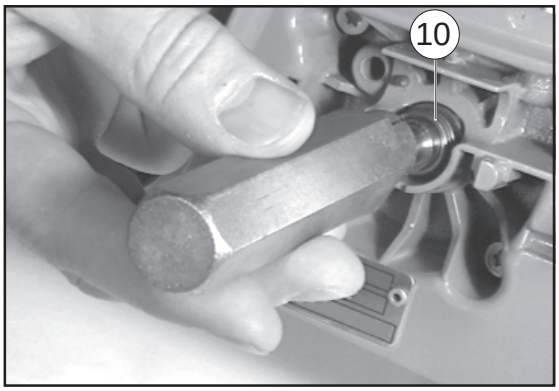
03 Oil pump



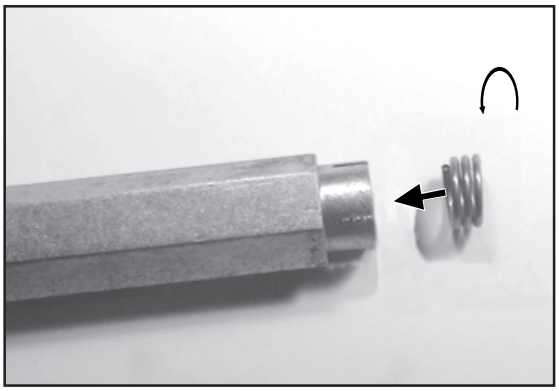
03-04 Checking the intake line and the filter
Withdraw the intake line (3) from the crankcase. Remove the filter (8) from the intake line for cleaning.



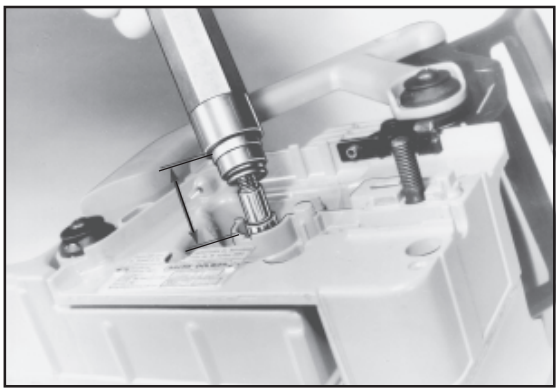
03-04 Greasing the suction line
Prior to the installation of the suction line grease the line in way of the sealing face (9) at the crankcase using silicone grease.



03-05 Removing the drive worm
Screw the extractor device 950 500 011 in place for the removal of the drive worm (10).
Caution: Left-hand thread.
Manually remove the worm from the crankshaft using device 950 500 011.



03-05 Mounting the drive worm
Screw the worm fully into the device.



03-05 Fitting the drive worm
Pass the device over the crankshaft until the edge (arrow) butts against the crankcase.

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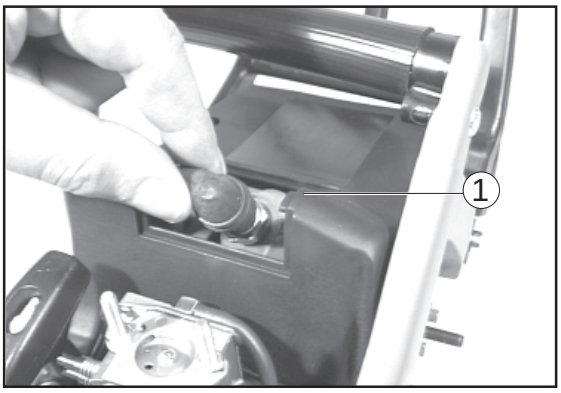
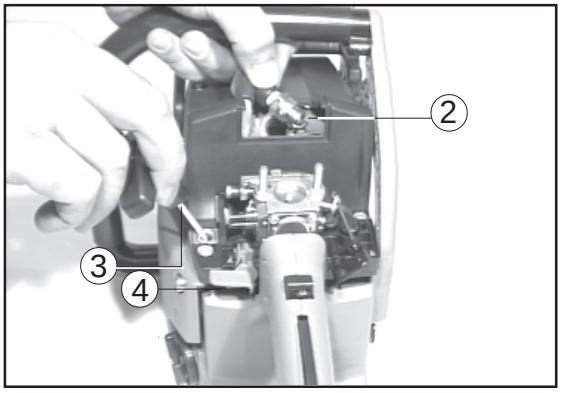
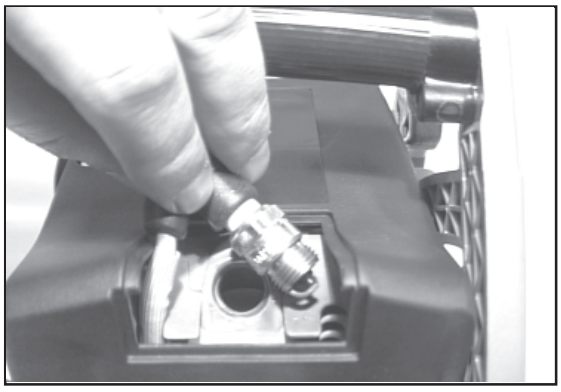
04 Ignition system



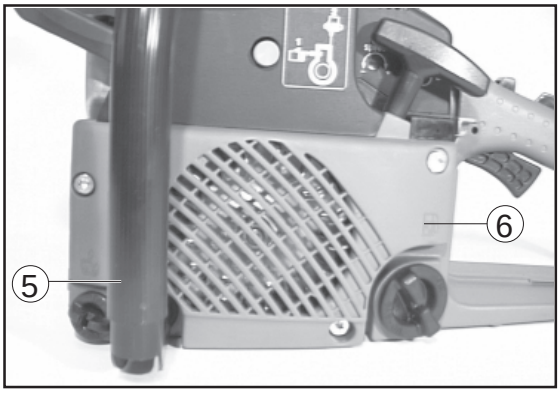
04-01 Removing the spark plug
Pull off the spark plug cap (1) and remove the spark plug using wrench no.941 716 131.



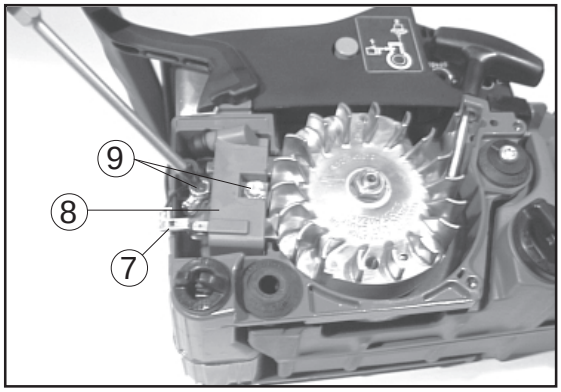
04-01 Checking the spark plug
Connect the spark plug (2) with the cap (1) and connect to cylinder.
Smartly withdraw the starter rope (3).
Caution: The short-circuit switch (4) must be in position „I“ (horizontal).



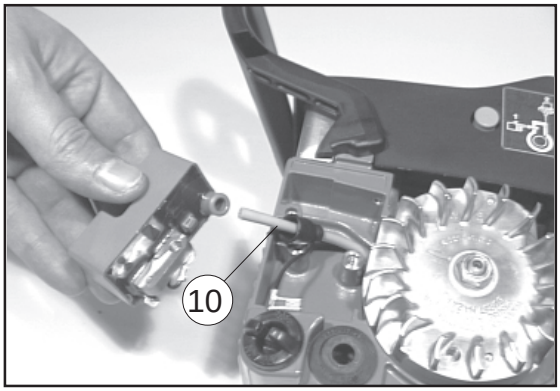
04-01 Checking the spark plug
If no spark can be produced, try again using a new spark plug.
Clean or renew contaminated or defective spark plugs.



04-04 Gaining access to the ignition armature
Before removing the ignition armature, it is necessary to remove the handle (5) and the fan housing (6).

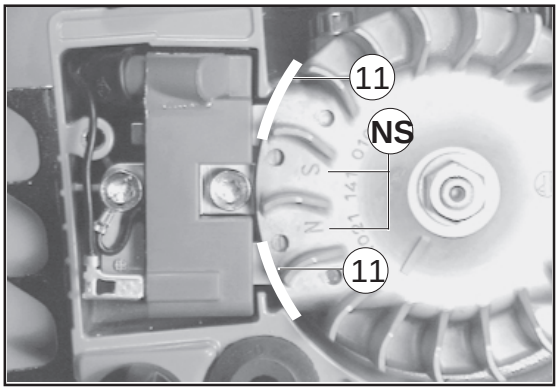


04-04 Removing the ignition armature
Disconnect the short-circuit cable (7) from the ignition armature (8). Remove the screws (9).

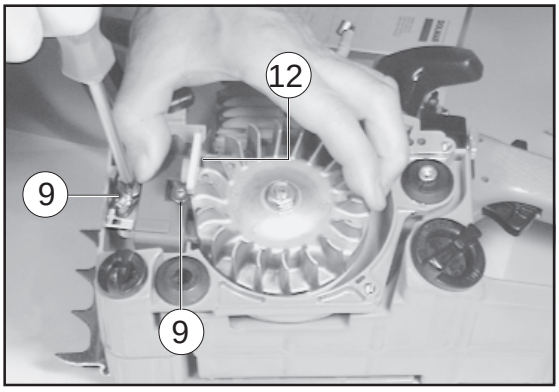


04-04 Removing the ignition armature
Hold the ignition cable (10) and unscrew the ignition armature.

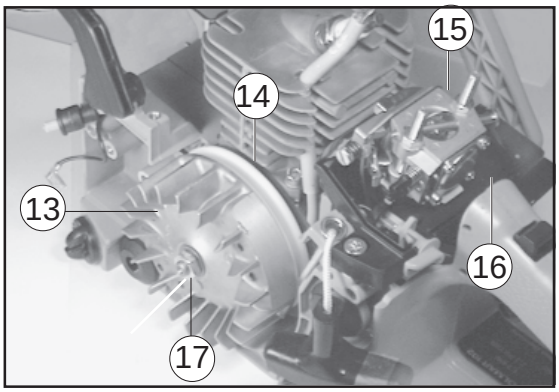
04 Ignition system



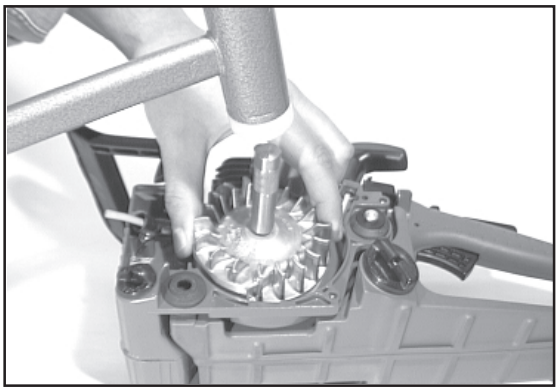
04-04 Mounting the ignition armature
When mounting the ignition armature, the air gap (11) between the flywheel and the ignition armature must be set to **0.2 mm** using gauge 944 500 890.



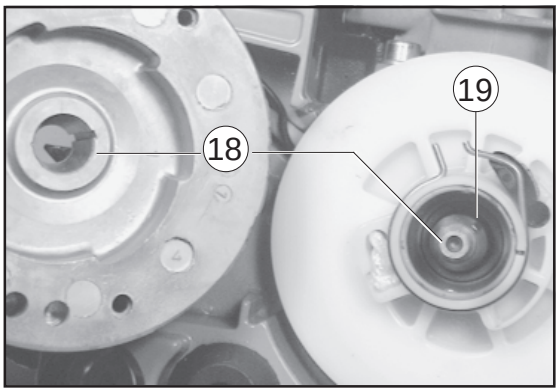
04-04 Adjusting the air gap
Insert the adjustment gauge (12) and turn the marking **N/S** of the flywheel towards the ignition armature. Push the ignition armature tightly against the flywheel and uniformly tighten the screws (9) using a torque of **3 Nm**.



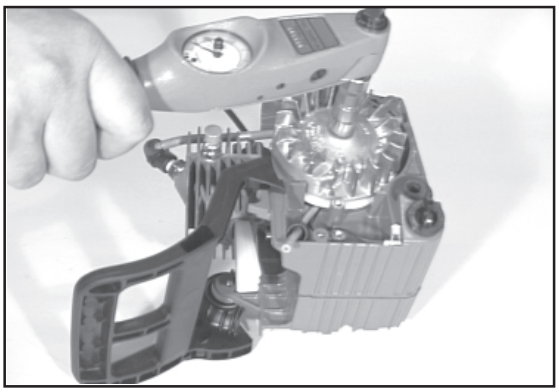
04-04 Replacing the ignition cable and the short-circuitcable
Prior to the replacement of these cables it is necessary to remove the flywheel (13), starter system (14), carburettor (15) and the bottom (16).



04-05 Withdrawing the magnet wheel
Immobilise the cylinder unit using the piston stopping wedge. Screw off the nut (17).Screw on punch 944 500 880. Strike a jarring blow to separate the flywheel from the crankshaft.

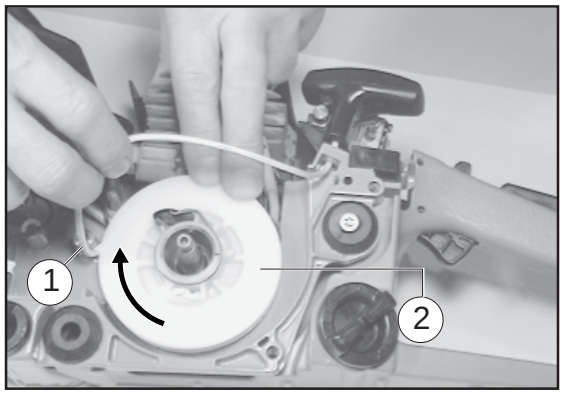


04-05 Mounting the flywheel
Clean the crankshaft and the flywheel cone (18) before mounting the flywheel. Ensure that the key (19) is seated correctly.

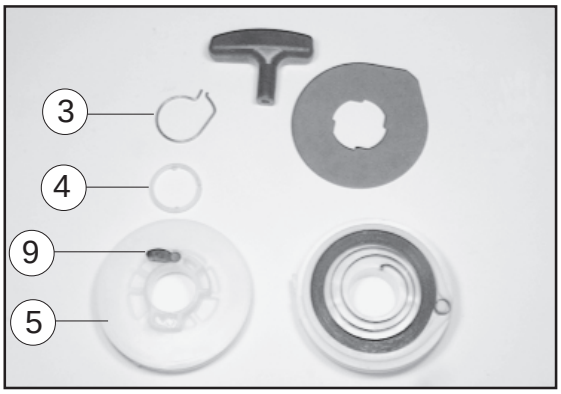


04-05 Tightening the flywheel
Tighten the flywheel using a torque of **20 Nm**.

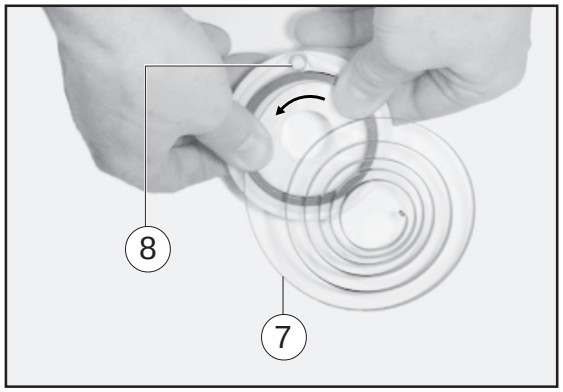
05 Starting system



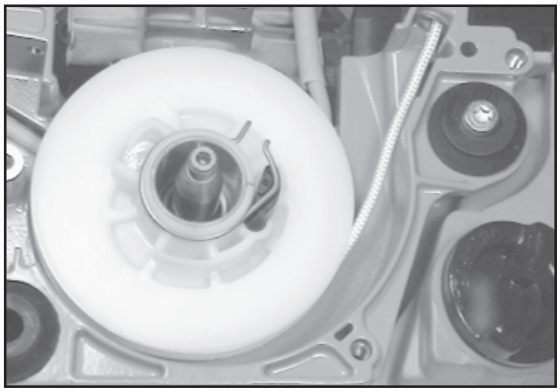
05-02 Relieving the return spring
Relieve the return spring, before removing the starting system. For this purpose reel off the starting rope (1) from the rope drum (2) in the direction of the arrow.



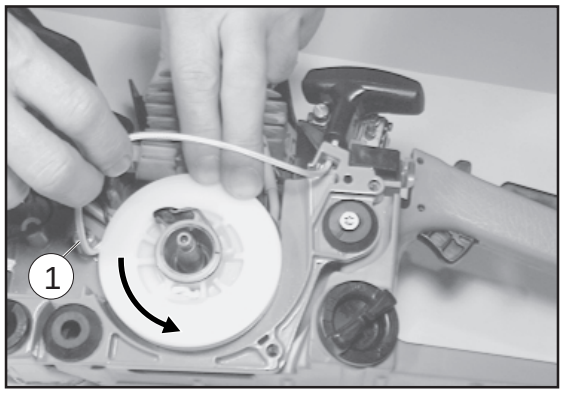
05-02 Removing the starting system
Remove the brake spring (3) and the retaining ring (4). Carefully take out the rope drum (5) and remove the disk (6).



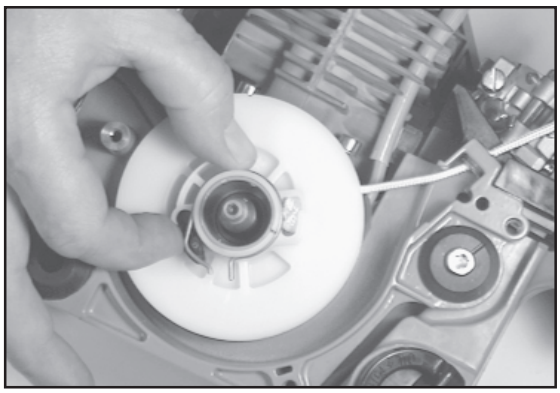
05-02 Coiling the return spring by hand
Engage the eye of the spring over the pin (8) of the rope drum. Coil the spring (7) in an anti-clockwise direction.
Grease the spring prior to installation using **grease no. 944 360 000**



05-02 Mounting the rope drum
Pass the rope drum over the guide pin on the crankcase housing and fit the retaining ring (4) to prevent the drum from falling out.
Apply silicone paste to the starter ratchet (9) prior to installation.

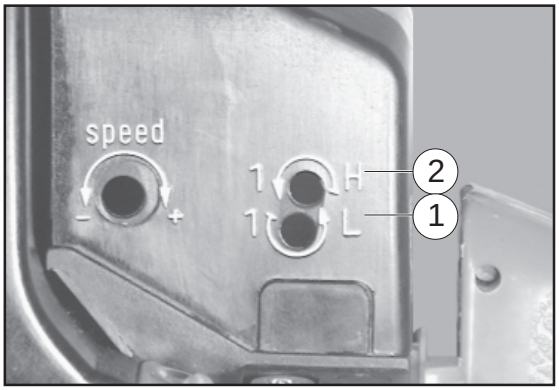


05-02 Coiling the starter rope
Coil the starter rope (1) as far as possible on the drum. Hold the rope tight and together with the drum turn 2 - 3 turns in the direction of the arrow to pretension the return spring.

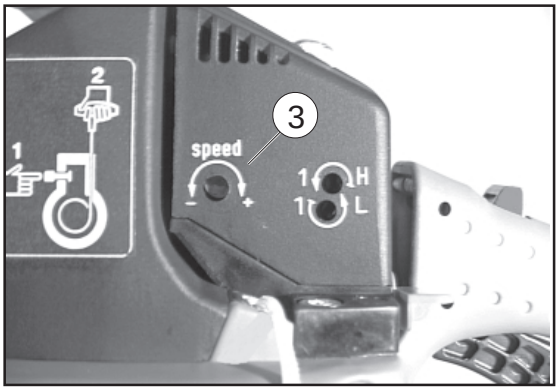


05-02 Checking the return spring
To check the pretensioning of the spring, withdraw the rope completely and hold it in the extended position. It must now be possible to turn the rope drum by at least another half turn. Reduce the preload tension, if this is not possible.

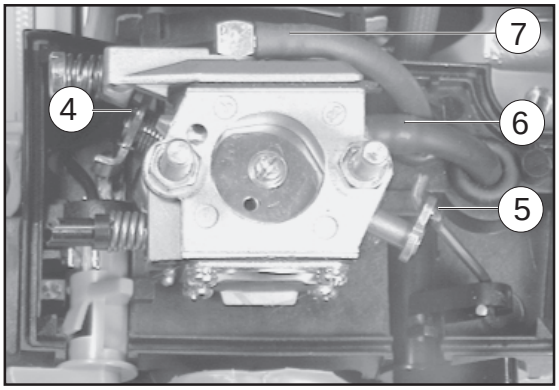
06 Carburettor/intake system



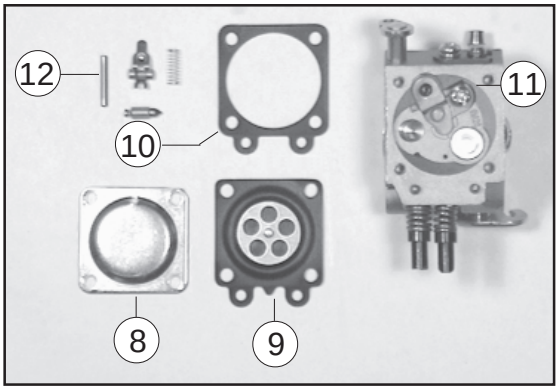
06-01 Adjusting the carburettor
For basic adjustment screw in both screws **L** and **H** against the stop. Then back off the idling jet (1) by 1 - 1 1/4 turns and the high speed jet (2) by 1 - 3/4 turn.



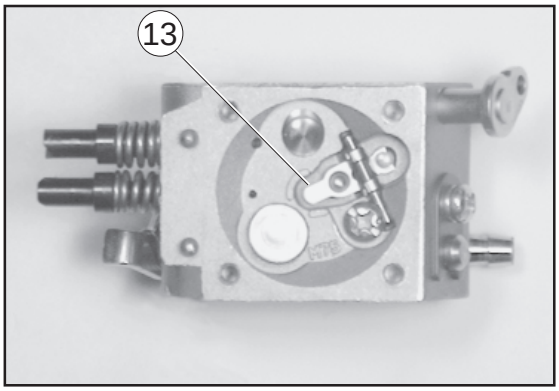
06-01 Idling adjustment
When during idling the engine speed is too high (moving chain) or too low (engine stalls), correct the setting of the idling screw **S** (speed) accordingly.



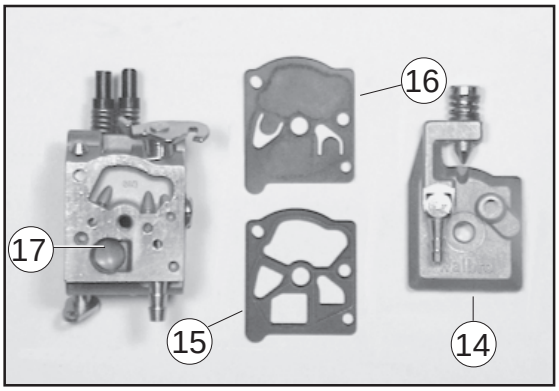
06-02 Removing the carburettor
Unscrew the nuts. Disengage the throttle linkage (4) at the lever of the throttle valve shaft. Remove the choke lever (5). Separate the fuel line (6) and the impulse lead (7) from the carburettor.



06-03 Control side of carburettor
Unscrew the cover (8) and remove the control diaphragm (9) and the gasket (10). Remove screw (11). The control set (12) comprises the inlet needle, rocker arm, spring and shaft.

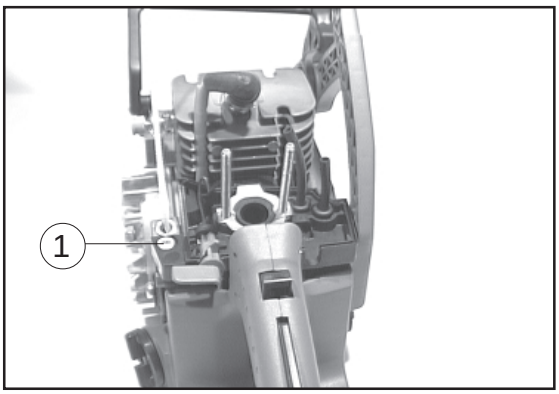


06-03 Aligning the rocker arm
Following installation the rocker arm (13) must be aligned parallel with the carburettor bottom.
Gauge 956 008 000

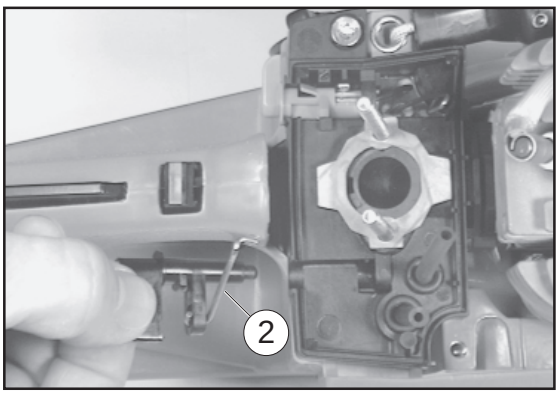


06-04 Pump side of carburettor
Unscrew the cover (14) and remove the joint (15) and the pump diaphragm (16).
Carefully remove the fuel filter (17) from the carburettor body for cleaning.

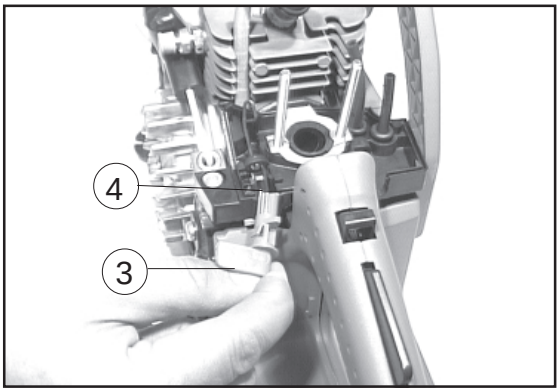
06 Carburettor/intake system



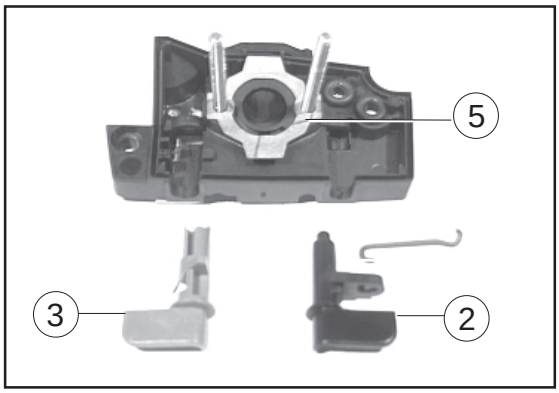
06-08 Removing the bottom
The bottom, together with the intermediate flange, is attached by means of two screws to the cylinder and by means of one screw (1) to the housing.



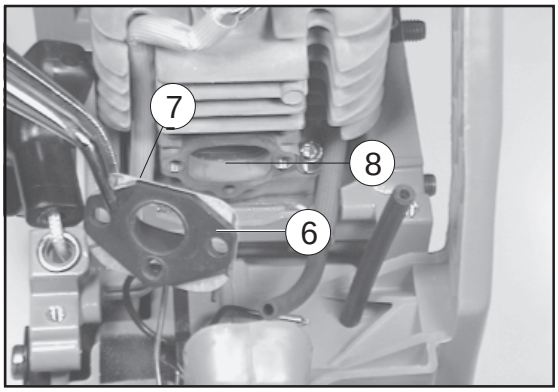
06-08 Removing the choke lever
Withdraw the choke lever (2) from its guide in the bottom.



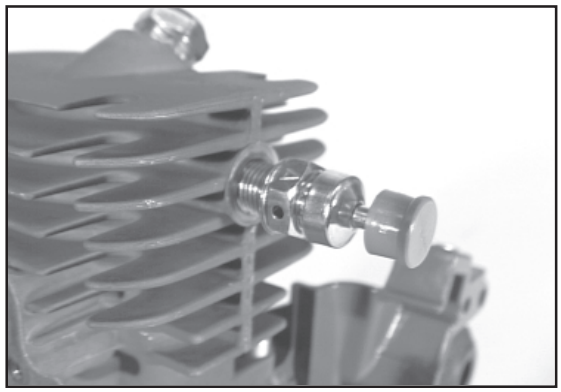
06-08 Removing the short-circuit switch
Slightly lift the short-circuit switch (3) and remove it from the bottom.
Withdraw the cable (4) from the switch housing.



06-08 Bottom with installation parts
Choke lever (2), short-circuit switch (3) and joint (5).

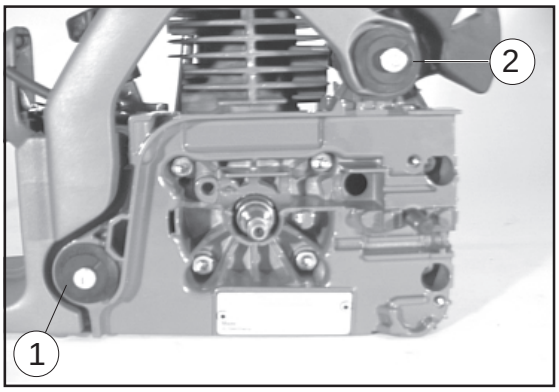


06-08 Removing the intermediate flange
Following the removal of the bottom, the intermediate flange, (6) together with the joints(7 and 8), can be removed.

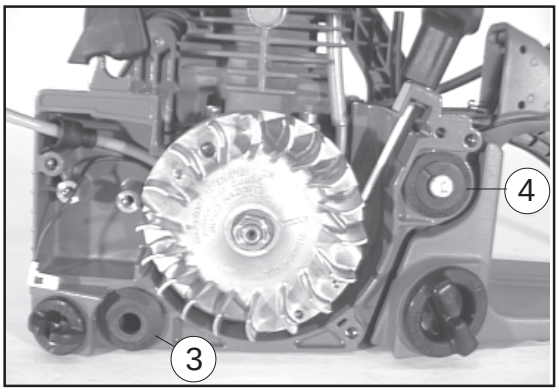


07-01 Checking the Decompression valve
Remove top cover (cylinder/air filter). Unscrew the deco valve. Clean or renew in the case of contermination or wear.
Tighten the deco valve using a torque of **8 Nm**.

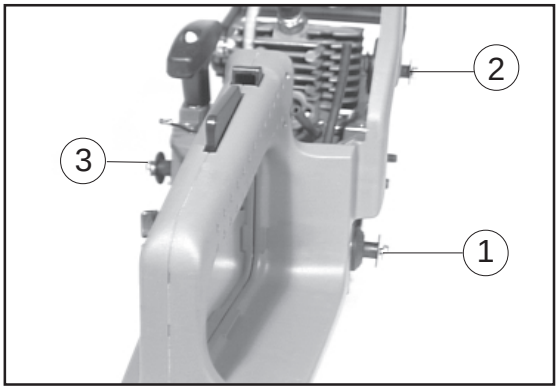
08 Vibration damping system / 09 Fuel tank



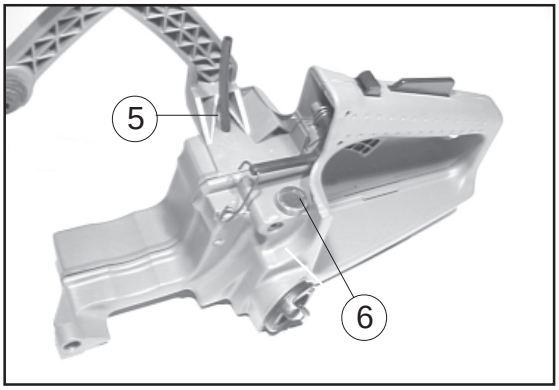
08-02 Vibration damper „CS“
Two of the total four vibration dampers (1/ 2) are arranged at the crankcase clutch side (CS).



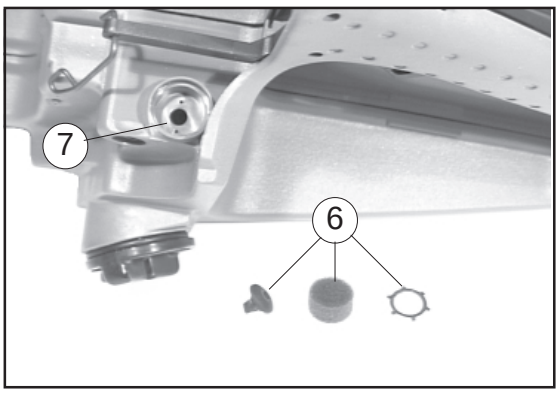
08-02 Vibration damper „MS“
The other two vibration dampers (3 / 4) are arranged at the crankcase magnet side (MS).



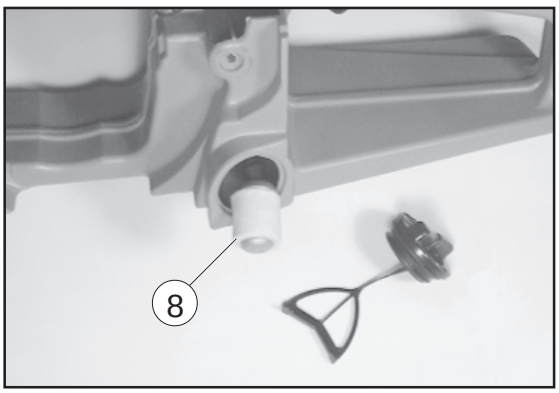
08-02 Replacing the vibration dampers
For replacing the vibration dampers and for removing the fuel tank, unscrew all four screws and withdraw the bushes (1, 2, 3).



09-01 Fuel tank
Arranged in the fuel tank are the ventilation valve (6) and the intake line (5) incorporating the fuel filter.

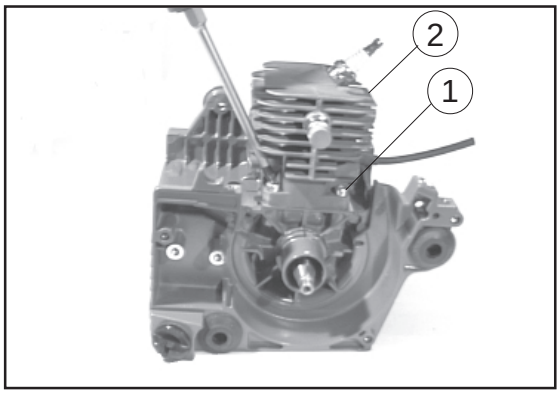


09-02 Replacing the ventilation valve
For cleaning and replacing the ventilation valve (6) remove the valve from its seat in the fuel tank (7).

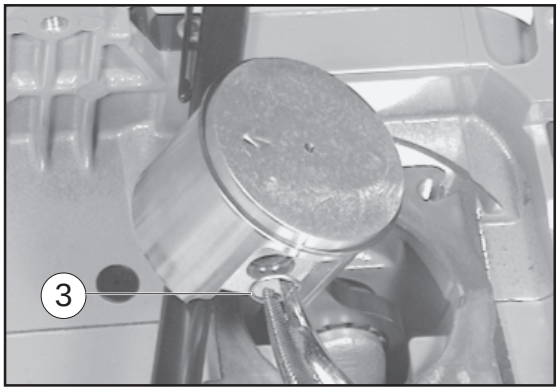


09-05 Checking the fuel filter
Remove the screw plug and pull out the filter (8) from the fuel tank. For cleaning and replacing withdraw the filter from the intake line.

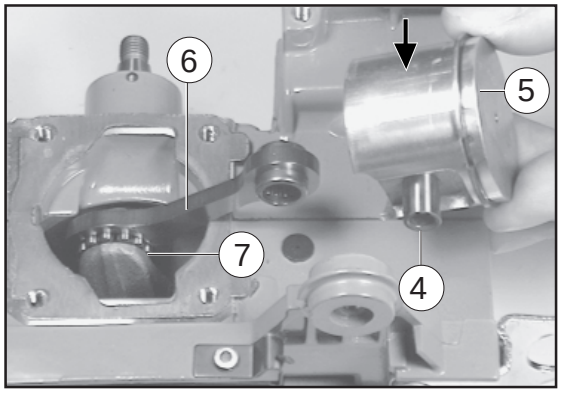
10 Cylinder, piston / 11 Crankcase



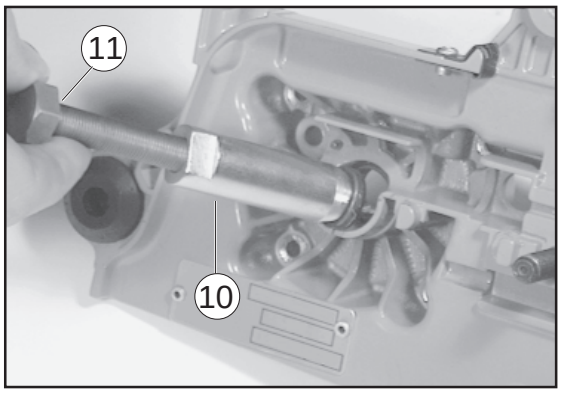
10-01 Removing the cylinder
Remove the four attachment screws (1) of the cylinder (2). Withdraw the cylinder from the crankcase and piston.



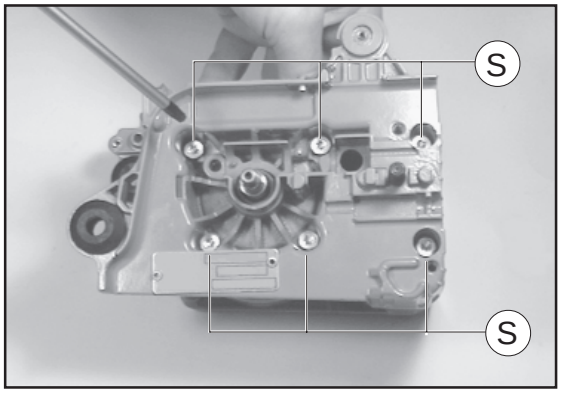
10-01 Removing the retaining rings
Using a pair of pointed pliers remove the two retaining rings (3) from the piston.
Note: Do not displace the connecting rod (6) after the removal of the cylinder, as otherwise the loose rollers (7) of the connecting rod bearing would fall out.



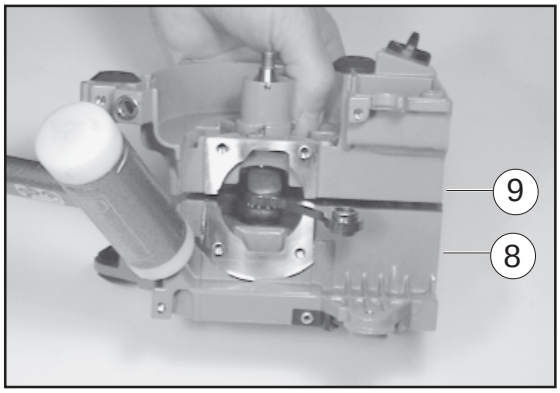
10-01 Removing the piston
Press out the gudgeon pin (4) in the direction of the arrow. Separate the piston (5) from the piston rod with the permanently fixed needle bearing (6) for the gudgeon pin.



11-02 Replacing the radial rings
Pass the device (10), part no.944 500 870 over the crankshaft and screw it tightly into the rubber lip of the radial ring. Hold the device and withdraw the radial ring by screwing in the screw (11).

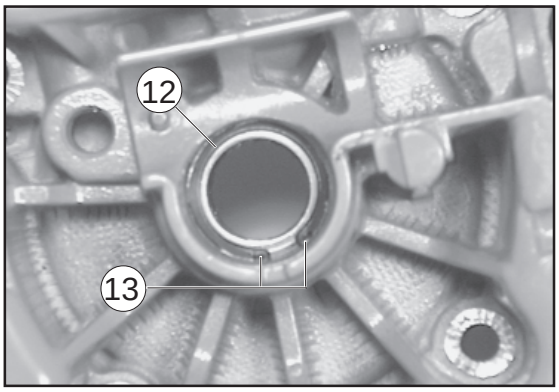


11-03 Unscrewing the crankcase screws
The two crankcase halves KS/MS are screwed together by means of six screws (S).

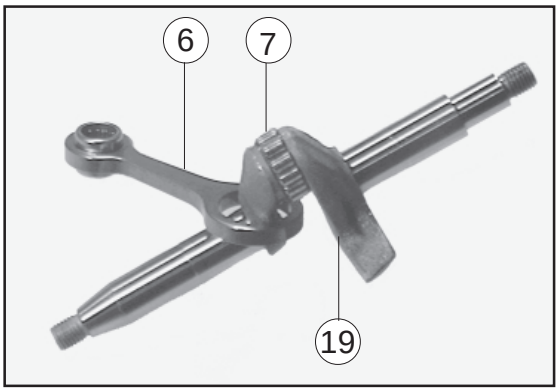


11-03 Dismantling the crankcase
After the removal of the screws, the two halves of the crankcase (8, 9) can be separated by lightly tapping with a plastic hammer.

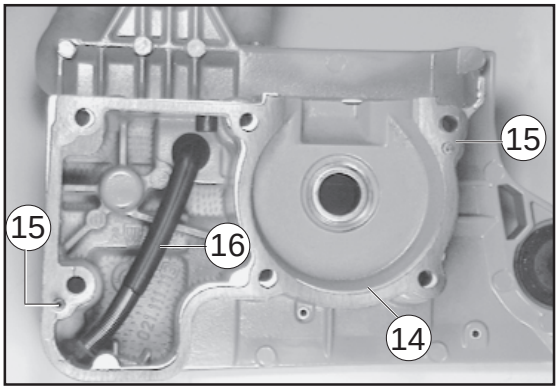
11 Crankcase/Crankshaft



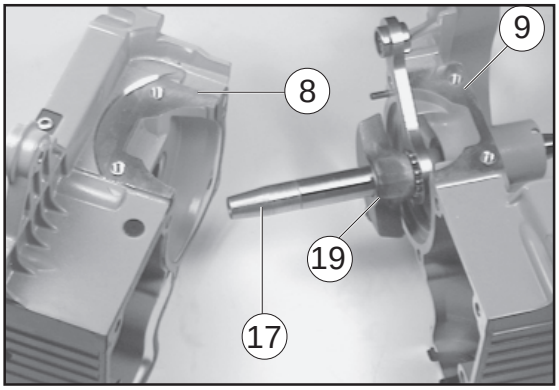
11-03 Removing the needle bearing
Prior to the removal of the needle bearing (12), remove the retaining ring (13) using a suitable pair of pliers.
Note: Crankcases supplied as spare parts are already fitted with bearings/radial rings.



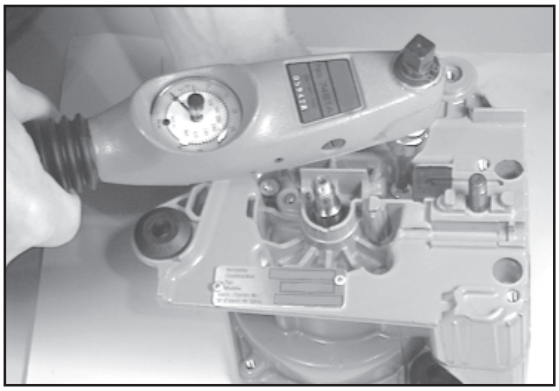
11-03 Mounting the connecting rod bearing rollers
Apply grease to the crankpin of the crankshaft (19) and install the 12 rollers (7). Pass the connecting rod (6) over the rollers.



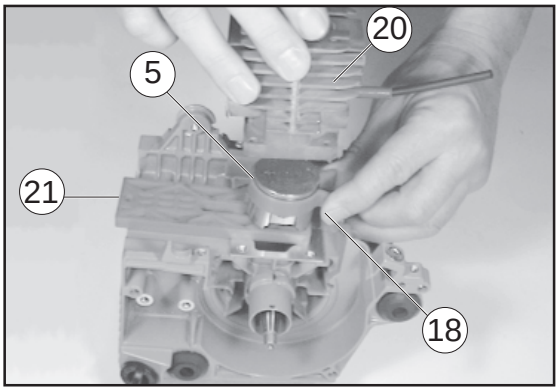
11-03 Aligning the suction line and seal for the crankcase
Prior to assembling the crankcase halves, place the gasket (14) over the locating pins (15/15). Install the chain oil suction line (16).



11-03 Assembling the crankshaft and crankcase
Install the crankshaft (19) in the crankcase (9). Fit the mounting bush (17), no. 944 500 540, to the crankshaft and mount the crankcase (8).



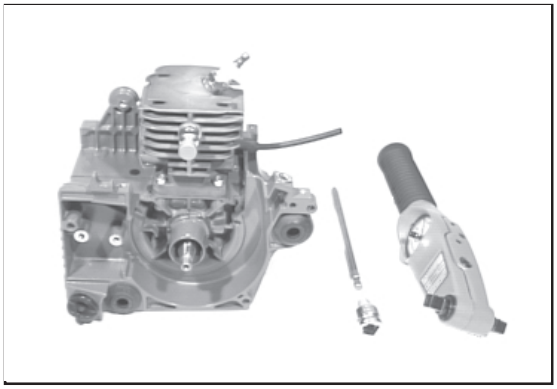
11-03 Assembling the crankcase halves
Install and tighten the screws using a torque of **10 Nm**.



11-03 Assembling the cylinder and piston
Place the fork (21) on the crankcase and mount the piston. Align the piston ring (5) and compress it using the tension band (18). Pass the cylinder (20) over the piston while pushing the tension band downwards.

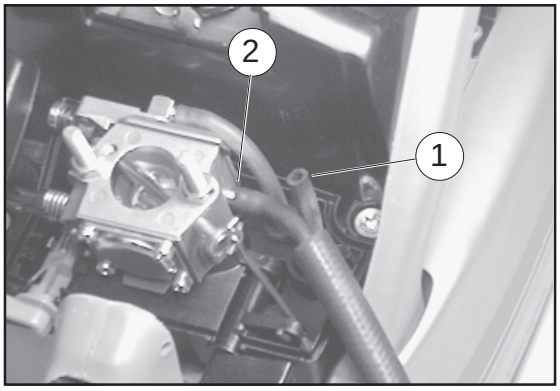
DOLMAR

12 Checking operations

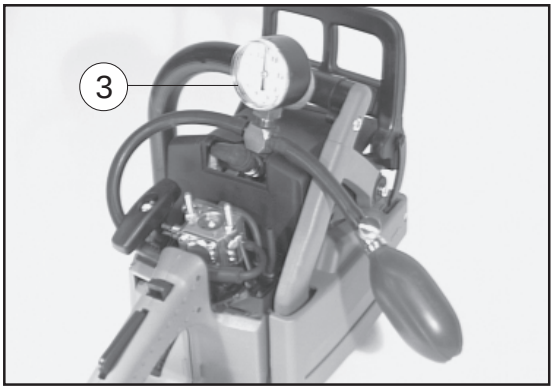


12-01 Tightening torque
Use the torque wrench, part no. 950 232 000, for tightening the screws, flywheel and the clutch.

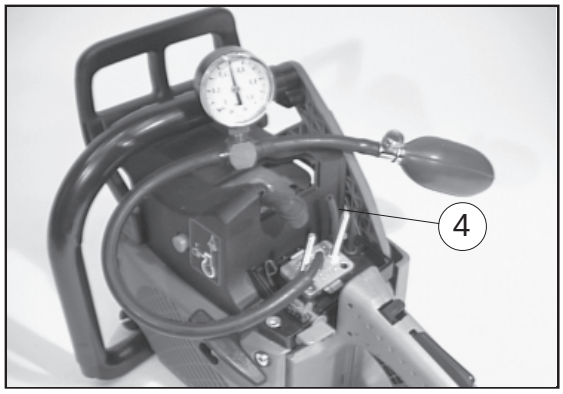
12-02 Checking the ignition system
Use the tester, part no.956 010 300, for checking the ignition system and the spark plug.



12-03 Checking the carburettor
Separate the fuel line (1) from the connecting nipple (2) of the carburettor and connect the pressure-tester (3), part no. 956 004 000.



12-03 Checking the carburettor **(continued)**
Subject the carburettor to a pressure test using a max. pressure of **0.5 bar**.



12-05 Checking the crankcase
For pressure-testing the crankcase, block the exhaust duct with plate 944 603 010. Screw the plate 944 603 020, with the connection nipple for the pressure tester, to the intermediate flange. Block the impuls line (4).

12-05 Checking the crankcase
Subject the crankcase to a pressure-test using a max. pressure of 0.5 bar.

Torques

Model	PS-340/341 PS-400/401
Muffler	8,0 + 1,0
Crankcase	10,0 + 1,0
Cylinder	6,0 ± 0,5
Ignition coil	3,0 + 1,0
Turbular handle	3,0 ± 0,5
Rubber buffer	2,5 ± 0,5
Intermediate flange	6,0 + 0,5
Carburator	2,5 + 0,2
Clutch bub	25,0 ± 2,5
Flywheel	20,3 - 2,7
Spark plug	15,0 ± 1,0

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Änderungen vorbehalten

Form: 995 721 020 (1.94 GB)